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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,665	12/08/2000	Christian Summerer	99 P 7719 US 02	6093

22494 7590 03/14/2003

DALY, CROWLEY & MOFFORD, LLP  
SUITE 101  
275 TURNPIKE STREET  
CANTON, MA 02021-2310

EXAMINER

PHAN, THAI Q

ART UNIT PAPER NUMBER

2123

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/733,665

Applicant(s)  
Christian Summerer

Examiner  
Thai Phan

Art Unit  
2123



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec. 08, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 4 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Apr. 02, 2001 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 10, 12 6) ☐ Other:

### **DETAILED ACTION**

This Office Action is response to patent application S/N: 09/733,665, filed on Dec. 08, 2000. Claim 4 is pending in this Office Action.

#### ***Drawings***

1. This application has been filed with formal drawings which are acceptable for examination purposes only.

#### ***Information Disclosure Statement***

2. The information disclosure statements filed on 8/12/1999 and 9/9/2002 respectively have been considered and placed in the record.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. As cited in claim 4 “such alignment mark, such alignment mark comprising” and “pair of orthogonal, line” in the claim body are with grammatical and idiomatic errors. Correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi, Kenji, US patent no. 6,411,386.

As per claim 4, Kenji discloses system for detecting an alignment mark on a semiconductor body with feature limitations substantially similar to the claimed invention (Abstract, Fig. 1, and Summary of the Invention). According to Kenji, the aligning apparatus measures positions of wafer marks, such alignment mark comprising a pair of sets of parallel lines disposed on the semiconductor wafer (Fig. 2), the parallel lines in one of the sets being orthogonal to the parallel lines in the other one of the set, wherein the parallel line sets are overlaying relationship. The apparatus includes

an optical system (col. 6, lines 28-50) for illuminating and scanning an alignment illumination comprising a pair of orthogonal lines of impinging light over the surface of the alignment mark, impinging lines are orthogonal to and laterally displaced from the other one of such pair of impinging light lines due to light reflected from the alignment lines in wafer mark on the semiconductor body (Figs. 1, 6, col. 10, lines 22-42, col. 11, lines 4-50, col. 17, lines 13-28, for example),

detector or sensor (Fig. 1, col. 7, lines 55-65, for example) for detecting laterally displaced beams of the reflected light. Such sensor has a CCD-type two-dimensional image device (col. 7, lines 55-65) for detecting reflected lights from orthogonal directions (Figs. 2, 6, col. 10, lines 22-42, col. 11, lines 4-50, col. 17, lines 13-28, for example). Kenji does not expressly disclose a pair of detectors spaced laterally to detect reflected lights as claimed.

Practitioner in the art at the time of the invention was made would have found Kenji detector having CCD-type two dimensional (array) image sensor could obviously imply the claimed limitation of pair of detectors spaced laterally because the CCD-type two dimensional image sensor has an array of sensing elements, or pair of sensors as claimed, arranged in two dimension usually lateral spacing, for detecting optical signals reflected in two dimensional and the CCD array would provide a high resolution 2-D image.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US patent no. 6,020,957, issued to Rosengaus et al., on Feb. 2000

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Phan whose telephone number is (703) 305-3812.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)305-3900.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 746-7239, (for formal communications intended for entry)

**Or:**

(703) 746-7240 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

March 9, 2003

*Thai Phan*  
*Patent Examiner*  
*AV 2123*